

Rush Island 1 Major Boiler Outage (MBO) – February-May 2007

Position:	Project Manager
Outage Scope:	Replace Reheater, Economizer, Lower Slope, Air Preheater, Steam Coils, Exciter, Switchyard Breaker, GSU Transformer and add Maintenance Power loop
Ameren Personnel Supervised:	9 engineers, 9 GCMS, 3 weld inspectors
Approximate # of Personnel:	350
Approximate Contract Cost:	\$52 million – (6 contractors)

Steam Generator Moisture Carryover Test – February 2006

Position:	Task Lead
Task Scope:	Perform MCO Test for Steam Generators using highly radioactive (1 Ci Na-24) source
Departments involved:	Chemistry, Radwaste, Operations, Isotope Supplier (MURR), Radiation Protection, Engineering

Callaway Refuel 14 Outage – October 2005

Position:	Daytime Lead
Project Scope:	Replace all Four Steam Generators
Engineers Supervised:	6
Approximate # of Personnel:	500
Approximate Cost:	N/A

Replacement Steam Generator Contract (2000 – 2006)

Position:	Project Lead
Project Scope:	Design, Procure and Oversee Construction of Four Replacement Steam Generators
Engineers Supervised:	None, directly
Approximate # of Personnel:	None, directly
Approximate Cost:	\$45 million – (1 contractor)

Steam Generator Replacement Startup Test Team (2004 – 2005)

Position:	Project Lead
Project Scope:	Develop a Startup Test Plan for Post Modification Work Performed in Refuel 14
Personnel Supervised:	4-8
Departments Involved:	Project Engineering, Plant Engineering, Operations, SGT (contractor), Outages, I&C

Callaway Refuel 13 Outage – April 2004

Position:	Outage Backshift Lead
Outage Scope:	Primary and Secondary Closures Nozzle Dam Installation/Removal – Four SGs Eddy Current Examination – Four SGs
Engineers Supervised:	2
Approximate # of Personnel:	80
Approximate Contract Cost:	\$6.4 million – (4 contractors)

Callaway Refuel 12 Outage – October 2002

Position:	Outage Backshift Lead
Outage Scope:	Primary and Secondary Closures Nozzle Dam Installation/Removal – Four SGs Eddy Current Examination – Four SGs Sludge Lance – Four SGs Bolt Hole Repair
Engineers Supervised:	2
Approximate # of Personnel:	80
Approximate Contract Cost:	\$5.2 million – (4 contractors)

Callaway Refuel 11 Outage – April 2001

Position:	Project Lead
Outage Scope:	Primary and Secondary Closures Nozzle Dam Installation/Removal – Four SGs Eddy Current Examination – Four SGs Sludge Lance – Four SGs Bolt Hole Repair
Engineers Supervised:	6
Approximate # of Personnel:	70
Approximate Contract Cost:	\$3.8 million – (4 contractors)

Steam Generator Replacement Task Team (1997 – 1999)

Position:	Project Lead
Engineers Supervised:	3
Approximate Contract Cost:	\$100,000 – (1 contractor)

Callaway Refuel 10 Outage – October 1999

Position:	Project Lead
Outage Scope:	Primary and Secondary Closures Nozzle Dam Installation/Removal – Four SGs Eddy Current Examination – Four SGs Electrosleeve™ Installation – Two SGs Sludge Lance – Four SGs Bolt Hole Repair
Engineers Supervised:	6
Approximate # of Personnel:	110
Approximate Contract Cost:	\$4.6 million – (5 contractors)

Callaway Refuel 9 Outage – April 1998

Position:	Project Lead
Outage Scope:	Primary and Secondary Closures Nozzle Dam Installation/Removal – Four SGs Eddy Current Examination – Four SGs Sludge Lance – Four SGs Bolt Hole Repair
Engineers Supervised:	6
Approximate # of Personnel:	70
Approximate Contract Cost:	\$4.7 million – (6 contractors)

Callaway Refuel 8 Outage – October 1996

Position:	Project Lead
Outage Scope:	Primary and Secondary Closures Nozzle Dam Installation/Removal – Four SGs Eddy Current Examination – Four SGs Laser-Welded Sleeving Installation – Two SGs Sludge Lance – Four SGs Bolt Hole Repair
Engineers Supervised:	6
Approximate # of Personnel:	90
Approximate Contract Cost:	\$3.1 million – (4 contractors)

Callaway Refuel 7 Outage – April 1995

Position:	Project Lead
Outage Scope:	Primary and Secondary Closures Nozzle Dam Installation/Removal – Four SGs Eddy Current Examination – Four SGs Chemical Cleaning – Four SGs Sludge Lance – Four SGs Bolt Hole Repair
Engineers Supervised:	6
Approximate # of Personnel:	120
Approximate Contract Cost:	\$6.1 million – (5 contractors)

Callaway Refuel 6 Outage – October 1993

Position:	Project Lead
Outage Scope:	Primary and Secondary Closures Nozzle Dam Installation/Removal – Two SGs Eddy Current Examination – Two SGs Pressure Pulse Cleaning – Four SGs Sludge Lance – Four SGs Bolt Hole Repair
Engineers Supervised:	6
Approximate # of Personnel:	75
Approximate Contract Cost:	\$2.3 million – (4 contractors)

Callaway Refuel 5 Outage – April 1992

Position:	Project Lead
Outage Scope:	Primary and Secondary Closures Nozzle Dam Installation/Removal – Four SGs Eddy Current Examination – Two SGs Shot Peen – Four SGs Sludge Lance – Four SGs
Engineers Supervised:	9
Approximate # of Personnel:	100
Approximate Contract Cost:	\$5.5 million – (4 contractors)

Steam Generator Moisture Carryover Test – February 1994

Position:	Task Lead
Task Scope:	Perform MCO Test for Steam Generators using highly radioactive (1 Ci Na-24) source
Departments involved:	Chemistry, Operations, Contractor (Westinghouse), Radiation Protection, Engineering

Callaway Refuel 4 Outage – October 1990

Position:	Project Lead
Outage Scope:	Primary and Secondary Closures Nozzle Dam Installation/Removal – Two SGs Eddy Current Examination – Two SGs Sludge Lance – Four SGs Bolt Hole Repair
Engineers Supervised:	7
Approximate # of Personnel:	70
Approximate Contract Cost:	\$900,000 – (3 contractors)

Callaway Refuel 3 Outage – April 1989

Position:	Project Lead
Outage Scope:	Primary and Secondary Closures Nozzle Dam Installation/Removal – Two SGs Eddy Current Examination – Two SGs Sludge Lance – Four SGs Bolt Hole Repair
Engineers Supervised:	7
Approximate # of Personnel:	70
Approximate Contract Cost:	\$900,000 – (3 contractors)

Callaway Refuel 2 Outage – September 1987

Position:	Project Lead
Outage Scope:	Primary and Secondary Closures Nozzle Dam Installation/Removal – Four SGs Eddy Current Examination – Two SGs Bolt Hole Repair
Engineers Supervised:	5
Approximate # of Personnel:	40
Approximate Contract Cost:	\$750,000 – (2 contractors)

Callaway Spring 1987 Mid-Cycle Outage – March/April 1987

Position:	Project Lead
Outage Scope:	Primary and Secondary Closures Eddy Current Examination – Two SGs Sludge Lance – Four SGs Bolt Hole Repair
Engineers Supervised:	4
Approximate # of Personnel:	50
Approximate Contract Cost:	\$900,000 – (1 contractor)